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ABSTRACT

Compiled is a selected bibliography of social sciences in forestry, including economic, historic, sociological, and business aspects. Five major inclusive categories are the following: social science applied to forestry at large, applied to forestry's productive agents, applied to forest production, applied to manufacturing, and applied to marketing, trade, and demand for forest output. Arranged alphabetically by author, each entry contains the source of information, place and date of publication, volume number, and number of pages. A brief description of each resource is given. Compilation sources include many periodical professional journals, FORESTRY ABSTRACTS, DISSERTATION ABSTRACTS, the USDA BIBLIOGRAPHY OF AGRICULTURE, FAO DOCUMENTATION, and publication lists from the United States Forest Service experiment stations. (BP)

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SOCIAL SCIENCES in FORESTRY

A CURRENT SELECTED BIBLIOGRAPHY

NO. 38 OCTOBER 1975

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I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

A EHAN, R. W. Forestry and the end of innocence. American Forests 81(5): 16-19, 38, 40-49. May 1975.

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Includes the following papers: (1) Supplementary statistics on size and ownership of woodlands and on land use in Britain (J. R. Aldhous); (2) Problems in the management of broad-leaved woodland, with special reference to privately owned woods (J. E. Garfitt); (3) Past, present, and future values of broadleaved timbers (G. J. Agate); (4) The value of broadleaved woodland for nature conservation (G. F. Peterken); (5) Broadleaved woodland in the British landscape (J. H. B. Workman); (6) Broadleaved woodland in relation to recreation (R. M. Sidaway); (7) The management of upland broadleaved woodlands for nature and landscape conservation (R. Goodier and M. E. Ball); (8) Aims of research in relation to broadleaved woods and amenity trees (J. R.Aldhous).

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Highlights and statistics on forest area and timber volume, growth, mortality, ownership, and use in 1972.

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History of an example of the system of resident laborers with tenant-farming rights that was introduced into large private and public forests in Hokkaido around 1910, practiced during the capitalist development period, 1918-1948, and discontinued in the national land reform, 1948.

A1 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. FAO/ILO/SIDA Consultation on employment in forestry, Chiang Mai, Thailand--February 10 to March 1, 1974. 1974.

Papers presented include the following: (1) Employment in forestry, report on the conference (FAO), 32 pp.; (2) The labor market situation in forestry (M. Carlbom), 6 pp.; (3) Forestry workers in developing countries--a survey of available literature (U. Hammarstrom), 13 pp.; (4) Recruitment for forest work by cooperatives in India (S. A. Hejmadi), 21 pp.; (5) Employment, mechanization, and problems of forest workers (L. Sandahl), 15 pp.; (6) A note on the influence of production methods in forestry on employment opportunities (U. Sundberg), 3 pp.; (7) Note on some significant trends in forestry (U. Sundberg), 4 pp.

A1 WARNERYD, K. E. Some principles of personnel administration. Food and Agriculture Organization of the United Nations. FAO/SIDA Seminar on Forestry Social Relations for English-Speaking Countries in Africa and the Caribbean--Rome, Italy, April 1-26, 1974. 4 pp. 1974.

Principles of staff management in forestry administration.

A3 BORK, E. Analysis of wage funds in state forest enterprises. In German. Sozialistische Fortwirtschaft 24(5): 132-133. May 1974.

A3 ERVIN, DAVID E. An economic analysis of income determination for production workers in Oregon's wood products industry: a human capital approach. Dissertation, Ph.D. Oregon State Univ. 214 pp. 1975.

Concept of analyzing income components separately and then combining the significant determinants to derive their total effect on income.

II APPLIED TO FORESTRY'S PRODUCTIVE AGENTS

A4 SHARMA, L. C. Employment and working conditions in forestry in India. Food and Agriculture Organization of the United Nations. FAO/ILO/SIDA Consultation on employment in forestry, Chiang Mai, Thailand, February 10 to March 1, 1974. 15 pp. 1974.

B2b VORONIN, I. V., and B. A. PARSHIN. The productivity and efficiency of the work of the administrative staff in forest districts. In Russian. Lesnoi Zhurnal 17(2): 136-139. 1974.

Proposed method of quantifying the productivity and efficiency of the administrative staff in Soviet forest enterprises.

B3a CRAWFORD, DENNIS B. Forest owners benefit from association. World Wood 16(3): 31-33. Mar 1975.

Potential of private woodlands for owners and industry is demonstrated by two organizations in Scotland.

B3a CZERNY, K. Tasks and organization in cooperative forest management. In Hungarian. Erdo 23(7): 296-299. Jul 1974.

B3a MILLS, THOMAS J. Investment priorities for small-owner assistance programs. Jour. of Forestry 73(4): 210-213. Apr 1975.

Direct public assistance to encourage timber production can be efficient only if investments are ranked according to an explicit priority scheme. A prerequisite to priority ranking is a concrete, operational program goal.

B3a MONTGOMERY, ALBERT A., VERNON L. ROBINSON, and JAMES D. STRANGE. Computer model offers guide for private woodland owners. Forest Farmer 34(8): 6-7, 14-15, 17. Jun 1975.

A study of small-holding sample plots from the latest Georgia forest survey, which are classified by region, timber site, type, and physiography. Four alternatives, ranging from planting to "no management," are tried for each plot, to find the financially best one. Inferences are drawn about the rationality of present timber programs and the potential supply on small holdings.

B3a SKOK, RICHARD A., and HANS M. GREGERSEN. Motivating private forestry--an overview. Jour. of Forestry 73(4): 202-205. Apr 1975.

Incentives available for use by public policy makers.

II APPLIED TO FORESTRY'S PRODUCTIVE AGENTS

B3a WORRELL, ALBERT C., and LLOYD C. IRLAND. Alternative means of motivating investment in private forestry. Jour. of Forestry 73(4): 206-209. Apr 1975.

Various obstacles prevent different private owners from contributing as much as they might to the timber production goal. A number of policy instruments are available to various agencies for overcoming these obstacles.

B3c HART, CYRIL. A guide to home-grown timber prices and forestry costings. Chenies, Coleford, Forest of Dean, Gloucestershire. 60 pp. 1975.

B3c HOLMES, W. D., and N. A. Q. VAUGHAN. Survey of private forestry costs in Scotland--twenty-first annual report for forest year 1972. Univ. of Aberdeen, Dept. of Forestry. 46 pp. + Appendices. Dec 1974.

Sample of 46 estates containing 24,000 hectares of forest.

C2 CONVERY, F. J. Some regional impacts of alternative rural land uses. Irish Jour. of Agric. Economics and Rural Sociology 4(2): 29-49. 1973/74.

Effects on employment and incomes of a switch from agriculture to forestry.

C2 HOFFMAN, J., and A. VEIDAHL. Changes of land use from forestry to agriculture and other uses. In Norwegian; Eng. sum. Tidsskrift for Skogbruk 82(2): 175-178. 1974.

C3 EREN, T. Comparative land uses: forestry versus shifting cultivation. Food and Agriculture Organization of the United Nations. FAO/ILO/SIDA Consultation on Employment in Forestry, Chiang Mai, Thailand, February 10 to March 1, 1974. 7 pp. 1974.

Creation of employment opportunities.

C1 KRUTILLA, JOHN V., and ANTHONY C. FISHER. The economics of natural environments. The Johns Hopkins Univ. Press, Baltimore. 320 pp. Jul 1975.

A method by which alternative uses of natural environments can be evaluated in a benefit-cost analysis, demonstrating that resource or extractive activities undertaken on public lands often receive preferential tax treatment and other financial advantages that obscure the actual cost of the project. By taking into account all the costs of a development project, and the changes over time that will affect the benefits of either development or preservation, they find that the scale is often tipped in favor of preserving a natural area.

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C3 LEVIN, MELVIN R., JEROME G. ROSE, and JOSEPH S. SLAVET. New approaches to state land-use policies. D. C. Heath and Company, Lexington, Massachusetts. 145 pp. 1974.

A review of methods available to states and communities for effectuating land-use plans, under the broad headings of police power, eminent domain, taxation, and transfer of development rights. Federal, state, and local responsibilities for land-use regulation. Application to the state of New Jersey.

C3 MEIJER, W. Timber boom and land-use problems in Indonesia. Environmental Conservation 1(1): 20. 1974.

The recent timber boom in Indonesia and the problems of land-use and nature conservation were leading topics in a symposium on lowland rain-forest organized by the Regional Centre for Tropical Biology and the Forestry School of the Agriculture Institute, Bogor, Java, June 1973.

C3 MOSHOFSKY, WILLIAM J. Land-use planning--how it affects the owner. Forest Farmer (Manual Edition) 34(5): 10-13. Mar 1975.

Review and analysis of the current push for state-wide, comprehensive land-use planning.

D1 GREGERSEN, HANS M., and ARNOLDO CONTRERAS. U.S. investment in the forest-based sector in Latin America. The Johns Hopkins Univ. Press, Baltimore. 128 pp. Jul 1975.

Problems faced by U.S. and host country. What motivates the host country to encourage investment and the foreign investor to invest. Specific recommendations for eliminating conflicts which arise during project negotiations. Forest conditions and the production, trade, and consumption of forest products. Comparison of the U.S. investment processes in the forest sector with those in other sectors.

D1 MURPHY, HARRY E. Forest land as an inflation hedge. Forest Farmer (Manual Edition) 34(5): 8-9. Mar 1975.

Forest property can be one of the best investments available to forest growers. The prudent owner will carry out management practices which maximize the value and development of his property consistent with his personal interests and financial situation.

D1 SPEARS, J. Methods of financing forestry. FAO of the UN, Rome, Italy. 11 pp. + 8 Appendices. 1974.

Methods of financing public and private forestry development: sources of funds, terms and conditions of loans, criteria used by lending agencies in the evaluation of projects. Paper prepared for the 10th Commonwealth Forestry Conference.

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D1 STEENBERG, B. K. A time to invest in forestry. In English, Spanish, and French. Unasylva 26(106): 2-6. 1974.

Importance of long-term forestry policy; role of forest services in decision making for land use. Effects of technological innovations on forest product processing techniques and of petroleum price increase on wood demand in the near future.

D1 WESTERBO, L. Choice between forest levy and tax-free allowances for development funds as source of financing. In Norwegian; Eng. sum. Tidsskrift for Skogbruk 82(2): 195-201. 1974.

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A1 AUSTRALIAN CONSERVATION FOUNDATION. Multiple use on forest land presently used for commercial wood production. Search: Science and Technology Soc. 5(9): 438-443. Sep 1974.

A1 BICHLMAIER, F., and E. GUNDERMANN. Quantification of the social functions of forests in the Bavarian Alps: A. Recreational function. B. Protective function. In German. Forschungsberichte, Forstliche Forschunganstalt Munchen. No. 21, 234 pp. 1974.

Part A--Techniques and major results of a study of the forests of Garmisch-Partenkirchen; B--Method for the quantitative evaluation of protection forests for erosion control and use of the Delphi or Seer method for arriving at a valuation of the hydrological importance of forests.

A1 BURDE, JOHN H. III. The use of production economics to allocate resources in timber and herbage production. Dissertation, Ph.D. Univ. of Arizona. 179 pp. 1974.

Economic analysis can provide for economically efficient allocation of resources among competing uses if the production relationships among the uses are known. Production relationships between timber and forage are developed for ponderosa pine land in Arizona. How the relationships can be used in economic analysis is determined and demonstrated.

A1 DESHLER, W. O. A guide to the application of the concept of multiple use to the problem of forest management. In Spanish. Food and Agriculture Organization of the United Nations Tech. Working Pap. 1, 78 pp. 1974.

Latin America.

A1 EDGAR, JAMES G. A multiple-objective approach to planning the use of public forest lands. Dissertation, Ph.D. Univ. of Michigan. 316 pp. 1974.

Decision-making in multiple use.

A1 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Dept. Review of the situation and problems in wildlife, wildlands, and national parks, Secretariat note. In Arabic and English. Near East Forestry Commission, Seventh Session, Baghdad, Iraq. 3 pp. 1974.

Relation of multiple use to social development in the Near East.

III APPLIED TO FOREST PRODUCTION

A1 FORSTLICHE FORSCHUNGSANSTALT MUCHEN. The raw-materials function within the framework of a plan of forest functions. In German. Forschungsberichte, Forstliche Forschunganstalt Munchen No. 20, 101 pp. 1974.

Colloquium on the position of wood production in relation to the other lines of forest production: administrative, ecological, environmental, and economic aspects of multiple-use planning in Bavaria.

A1 ILINSKII, V. O. Game management, an important stage in the organization of integrated forestry and game enterprises. In Russian. Lesnoe Khozyaistvo No. 6, pp. 76-80. 1974.

Organization, since 1969, of integrated forestry and intensive game management in the Nurimanov enterprise, a former leskhoz concerned only with forestry.

A1 INGELOG, T., and S. BRAKENHIELM. Forests, forestry, and environmental problems in Madeira. In Swedish; Eng. sum. Fauna och Flora 68(6): 238-249. 1974.

Land use and forest management in Madeira. A policy of multiple use is suggested to include timber production from the more valuable indigenous species, measures for erosion control and the provision of hunting grounds and recreation landscapes.

A1 ROWE, JUDITH J. Public demands on forests in relation to forest wildlife. Res. Development Pap. 104, Forestry Commonwealth, London. 1973.

The importance of wildlife, particularly nontimber plants and nongame animals, in adding to the quality of the forest environment has become increasingly recognized. Foresters are aware of the need to broaden their management skills to practice environmental forestry. Only by cooperation between forest research workers and their colleagues in such fields as recreation, economics, landscape architecture, and wildlife management will it be possible to develop mutual understanding of the specialist techniques and language and to incorporate these in forest management for the future.

A3 BROWN, THOMAS C., PAUL F. O'CONNELL, and ALDEN R. HIBBERT. Chaparral conversion potential in Arizona. Part II: an economic analysis. USDA Forest Serv. Rocky Mountain Forest and Range Exp. Sta. Res. Pap. No. RM-127, 28 pp. Aug 1974.

Is chaparral conversion on national forests in the Salt-Verde Basin economical? The costs of converting portions of 139 chaparral areas to grass and maintaining the conversion over a 50-year period are compared with the benefits to society in terms of increased water yield and forage for livestock, and reduced firefighting costs.

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A3 BROWN, THOMAS C., and RON S. BOSTER. Effects of chaparral-to-grass conversion on wildfire suppression costs. USDA Forest Serv. Rocky Mountain Forest and Range Exp. Sta. Res. Pap. No. RM-119, 11 pp. Apr 1974.

Properly planned, carried out, and maintained, chaparral-to-grass conversions should reduce the occurrence of large, expensive wildfires. Value of "fire benefits," though not as high as water and forage benefits resulting from conversion, is an important addition to a benefit-cost analysis.

A5a ALLGEMAINE FORSTZEITSCHRIFT. Forest recreation facilities. In German. Allgemeine Forstzeitschrift 29(33/34): 705-736. 1974.

A special number containing articles on protection of recreation forests.

A5a HOFSTAD, O. Evaluating social costs of different restrictions on managing recreation forests. In Norwegian; Eng. sum. Tidsskrift for Skogbruk 82(2): 179-183. 1974.

A5a INFANTYEV, V. I., and S. N. MALCEV. Planning recreational areas. New Zealand Forest Serv., Wellington. 6 pp. 1974.

Aims and basic planning considerations in the establishment of recreation forests in the montane zone of southern Kazakhstan for the benefit of city dwellers in the hot, dry plains.

A5a KOSTKA, M. S. Problems of tourist recreation use of forests. In Polish; Russian and English summaries. Sylwan 118(8): 1-16. 1974.

A review of some European and N. American literature: definitions of concepts; classification of forests as a recreation resource; identification of recreation-management tasks, especially as affected by number and characteristics of tourists (recreationists).

A5a MAJER, V. The demands made by the public on recreation forests in Czechoslovakia. In Czech; Russian and English summaries. Prace Vyzkumneho Ustavu Lesniho Hospodarstvi a Myslivosti 43, pp. 241-264. 1973.

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A5a MIYAKE, S. Private forests in Aichi Prefecture. In Japanese. Ringyo Gijitsu 5: 7-9. May 1974.

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A5a NAGASHIMA, E. Private forests in Tazawa Lake area in Akota Prefecture. In Japanese. Ringyo Gijitsu 5: 10-12. May 1974.

A5a PARKES, J. G. M. Public perceptions of water quality and their effect on water-based recreation. Information Canada, Ottawa. 53 pp. 1973.

Examination of the public's perception of water quality, the influence of water quality on water-oriented recreation, and the willingness of the public to pay for improvement.

A5a RENNISON, G. Forest recreation, with special reference to the proposed Westland Beech scheme. New Zealand Jour. of Forestry 19(1): 67-74. 1974.

Forest recreation and the recreational needs of people, in relation to wild forests and managed exotic and indigenous forests in New Zealand.

A5a SIDAWAY, R. M. Organization of outdoor recreation research and planning in the Netherlands. Res. and Development Pap., Forestry Commission, UK, No. 107, 22 pp. 1974.

A5a TARASOV, A. I. Costs involved in recreation, and the utilization of forests for recreation. In Russian. Lesnoe Khozyaistvo No. 7, pp. 27-29. 1974.

Attempt to evaluate the effect of tourists and recreationists on the forest as a basis for planning forest recreation.

A5a WAGAR, J. ALAN. Recreation insights from Europe. Jour. of Forestry 73(6): 353-357. Jun 1975.

A year's observations in Europe, including discussions of coarse visual textures in which timber harvests are seldom noticed, management and interpretation to help visitors understand forestry, effective zoning, and a computer-assisted technique for displaying the consequences of alternative land management choices.

A5a WALLMO, OLOF C. Important game animals and related recreation in arid shrublands of the United States. Proc., Third Workshop of the U.S./Australia Rangelands Panel, Tucson, Arizona, March 26-April 5, 1973. Pp. 98-107. 1975.

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A5b ROSE, D. W. Measuring the intensity of recreation use in developed areas. In German. Forst-und Holzwirt 30(2): 28-30. 1975.

Methods of measuring the intensity of recreation use, especially in developed areas.

A5b STOLZENWALD, R. H. The effect of recreation projects on costs and structures of forest enterprises. In German; Eng. sum. Forstarchiv 45(10): 189-195. 1974.

Problems of recreation in municipal forests of big cities in West Germany.

A5c DE FELICE, VINCENT N. Wilderness is for using. American Forests 81(6): 24-27. Jun 1975.

Issues regarding proposed regulations on the Great Gulf wilderness area, White Mountain National Forest.

A5d BRUSH, R. O. Recent developments in landscape assessment research with implications for managing forest land for recreation. USDA Forest Serv. North Central Forest Exp. Sta. Gen. Tech. Rep. NC-9, pp. 83-86. 1974.

A5d BUCHWALD, K., and W. ENGELHARDT. Conservation of landscape and protection of nature: a practical manual. In German. BLV Verlagsgesellschaft, Munich. 1974.

Shortened version of a handbook; aspects of special interest to foresters are the organization of and legislation on protection and conservation in German-speaking countries.

A5d GARYAEV, R. M. Landscaping work in forest parks. New Zealand Forest Serv., Wellington. 5 pp. 1974.

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A5d HELLES, F. Foresters' view on forest amenities. An opinion poll. In Danish; Eng. sum. Dansk Skovforenings Tidsskrift 60(1975): 46-60. 1975.

A5d JORGENSEN, E. Evaluation of ornamental trees. In Danish. Dansk Skovforenings Tidsskrift 59(1974): 158-166. 1974.

A5d MICHAL, I. The recreation exploitability of the forest and its aesthetic value, I and II. In Czech; Russian, English, German and French summaries. Lesnictvi (1973; 1974): 19; 20, (9;4): 767-780; 383-405. 1973/1974.

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A5d SKOGEN. Landscape and recreation in Sweden. In Swedish. Skogen 61(11): 435-475. 1974.

Research in progress at the Tagel Foundation, Smaland, into problems of landscape conservation.

A5d TAYLOR, D. The Essex landscape--a County Council program for replanting the countryside. International Dendrology Society Year Book 1973. London, International Dendrology Soc. Pp. 36-44. 1974.

A plan for replacing many of the trees and hedgerows that have disappeared recently because of changes in agricultural practice, the felling of woodland for agriculture and housing, and the incidence of Dutch Elm disease.

A5d USDA FOREST SERVICE. National forest landscape management--Volume 2, Chapter 1--The visual management system. USDA Forest Serv. Agriculture Handbook No. 462, 47 pp. Apr 1974.

Application of landscape management skills to the visual management system.

A6 DOUGLASS, JAMES E. Watershed values--Important in land-use planning on southern forests. Jour. of Forestry 72(10): ??. Oct 1974.

Although water quality is emerging as the major water problem in forest management, quantity and timing of streamflow are also important and interrelated watershed values which should be considered in land-use planning. Protection or improvement of hydrologic performance of forest soils will continue to be an important consideration in planning.

A6 KUNKLE, S. H. Water--its quality often depends on the forester. In English, Spanish, and French. Unasylva 26(105): 10-17. 1974.

Water quality as influenced by forest operations: groundwater and surface runoff in forest lands. Causes of water pollution in forest areas: eutrophication, logging, clear felling, use of herbicides.

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A7 BUTYNSKI, T. M., and W. VON RICHTER. In Botswana most of the meat is wild. In English, Spanish, and French. Unasylva 26(106): 24-29. 1974.

Wildlife as source of fresh meat in Botswana. Wildlife management, wildlife protection measures, hunting regulations, game licences for tribesman, profits from wildlife in 1972.

A7 GEORGIA STATE UNIVERSITY, ENVIRONMENTAL RESEARCH GROUP. Detailed analysis, economic survey of wildlife recreation. Georgia State Univ., Environmental Res. Group, Atlanta. 4 volumes. Mar 1974.

Number of households, by type, participating in hunting, fishing and other wildlife-related activity on national forests in the South; values placed on hunting and fishing; prospects for greater wildlife-related use of the forests. Participants favor intensifying wildlife management on public and private lands and increasing license fees for the purpose.

A7 SIDERITS, KARL. Forest diversity: an approach to forest wildlife management. In English; French sum. The Forestry Chron. 51(3): 99-103. Jun 1975.

Superior National Forest has instituted a forest wildlife habitat management program which identifies vegetation type, age class, and stand distribution as prime management components. The program incorporates basic ecological principles pertaining to diversity and stability, enabling land managers to pinpoint wildlife management needs more accurately.

A8 BUTT, JOHN P. Changing forest policy to meet urban needs. Jour. of Forestry 73(5): 278-280. May 1975.

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A8 ELLEFSON, PAUL V. Means of fulfilling forestry goals of urbanites. Jour. of Forestry 73(5): 275-277. May 1975.

A review of existing means, showing that the means are varied but many are outdated and are being amended by current legislation.

A8 LANINA, V. V., and N. S. KAZANSKAYA. Protecting and improving the stability of stands in forest parks. New Zealand Forest Serv., Wellington. 6 pp. 1974.

A8 WORRELL, ALBERT C. Forestry goals of urban residents. Jour. of Forestry 73(5): 272-274. May 1975.

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The forest owners, direct users, and preservationists all have some overt goals which may be served by forestry programs. However, a very large number of urban Americans are not personally aware of their dependence on the forests, and foresters must protect the interests of these people while at the same time responding to the goals of more vocal groups.

B1 CRAIG, GEORGE A. Laws affecting timber supply from national forests. Jour. of Forestry 73(6): 342-346. Jun 1975.

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B1 HUTT, P. A. Bradford plan continuous cover forest: an experiment in unevenaged forestry in the United Kingdom. Timber Grower No. 53, pp. 26-27, 29-36. 1974.

A long-term experiment on the Earl of Bradford's estate in Shropshire, where 100 acres of even-aged woodland are being converted to a selection forest. Advantages of the method, especially flexibility of management; problems of species choice; lay-out of units, marking, felling, extraction, and yield control.

B1 JOSEPHSON, H. R. Hardwood resources: have we enough in the right places? Tappi 57(10): 105-107. Oct 1974.

Although high-quality timber is in increasingly short supply, total harvest of hardwoods could be more than doubled over the next few decades for products such as pulpwood, pallets, and construction timber. Additional increases could be obtained by greater use of limbwood.

B1 RICHARDS, B. N. International shortage--tropical forests must fill the resource gap. Australian Forest Industries Jour. 40(6): 48. Jul 1974.

B3 BACHMURA, F. T. Catchment protection and agricultural and forestry development in the northern zone of El Salvador: the economics of reforestation in El Salvador. In Spanish. Food and Agriculture Organization of the United Nations Rep. No. FO:DP/ELS/71/506, Informe Tecnico 3, 92 pp. 1974.

Results of a feasibility study of afforestation based on a pilot program in the San Jose catchment. The project is feasible, promising a rate of return greater than 4 percent; the optimum rotation is 30-40 years.

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B3 DARGAVEL, J. B., L. G. THORN, D. R. COWEN, R. LINDSAY, and E.CHALLINGER. An information system for plantation management. Commonwealth Forestry Rev. 54(1): 27-37. Mar 1975.

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B3 MACPHERSON, S. J. An economic evaluation of afforestation with radiata pine on Tawarau forest. New Zealand Jour. of Forestry 19(1): 46-56. 1974.

Summary of a report completed in 1972, aimed at evaluating the worth of an exotic afforestation scheme for Tawarau forest, central North Island, New Zealand, from the national point of view.

B3 MISRA, D. N., and E. SUSAETA. Formulation and economic evaluation of a bamboo afforestation project in southeast Uttar Pradesh. New Delhi, India. Ford Foundation. 191 pp. 1973.

Resource base, demand and market analysis, technical and cost analysis, cost-benefit analyses.

B3 NIKLES, D. G. Economic aspects of tree improvement--cost-benefit of tree-breeding programs. Food and Agriculture Organization of the United Nations. Danish Funds-In-Trust TF No. 112, pp. 212-224. 1974.

B3 NIKLES, D. G. Planning a tree improvement program. Food and Agriculture Organization of the United Nations. Danish Funds-In-Trust TF No. 112, pp. 225-242. 1974.

B3 SUNDA, HENRY J., and GERALD L. LOWRY. Regeneration costs in loblolly pine management. Jour. of Forestry 73(7): 406-409. Jul 1975.

Regeneration of loblolly pine stands in the West Gulf Coastal Plain involves accounting costs of $29 to $75 per acre, but at 10-percent interest, charges against the next crop may vary from $633 to $3,644 per acre. Typical delay in regeneration may account for nearly 25 percent of the higher costs.

B3 SWANSON, CARL W. Reforestation in the Republic of Vietnam. Jour. of Forestry 73(6): 367-371. Jun 1975.

1974 reforestation goals were met. Increasing use of modern reforestation methods together with methods long used in Southeast Asia, has resulted in an increase in annual accomplishments from practically none in 1971 to 15,000 hectares in 1974.

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B4 ADAMS, D. L., and G. M. ALLEN. Lumber production from precommercial thinnings in northern Idaho. Sta. Pap., Forest, Wildlife and Range Exp. Sta., Univ. of Idaho No. 16, 11 pp. 1974.

Costs and income in a thinning operation in a 20-acre, 75-year-old stand of Douglas-fir, lodgepole pine, and grand fir.

B4 ANDERSON, WALTER C. Timber stand improvement--an entree to forestry for small-tract owners. Jour. of Forestry 73(4): 222-223. Apr 1975.

Timber stand improvement is an ideal practice to attract landowners to the forestry incentives program because it can fulfill the desires of the typical owner.

B4 BRACE, L. G., and D. J. STEWART. Careful thinning can preserve amenities and increase yield. Pulp and Pap. Mag. of Canada 75(8): 36-42. 1974.

Results of a commercial thinning trial in 1971 indicate that such an operation would still be profitable to the logger, and that the forest owner would realize a net return because of future sawlog gains.

B5 EK, ALAN R., and J. D. BRODIE. A preliminary analysis of short-rotation aspen management. In English; French sum. Canadian Jour. of Forest Res. 35(5): 245-258. 1975.

Aspen rotations may be moderately shortened with substantial increases in yields if utilization standards are tightened.

B5 MOLLER, C. M. Determination of rotation age under present conditions. In Danish. Dansk Skovforenings Tidsskrift 59(1974): 204-216. 1974.

B5 OLAWOYE, O. O. The value of short-rotation culture in Nigerian forestry. Commonwealth Forestry Rev. 53(3): 221-223. 1974.

Advantages of short-rotation silviculture with special emphasis on Nigeria. This system should encourage investment in timber growing, alleviate the problem of uneven distribution of timber resources, supply industry, and provide employment in rural areas.

B5 ROACH, BENJAMIN A. Scheduling timber cutting for sustained yield of wood products and wildlife. USDA Forest Service. Northeastern Forest Exp. Sta. Gen. Tech. Pap. NE-14, 13 pp. 1975.

The key to successful regulation for combined timber and wildlife production, with minimum impact on costs and timber yields, is long-term planning of cutting schedules and comparisons of yields under alternative schedules for small units of land.

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B5 SINITSYN, S. G., N. A. MOISEEV, V. V. ZAGREEV, and N. P. ANUCHIN. Calculating the allowable cut. In Russian. Lesnaya Promyshlennost. 176 pp. 1973.

Theory and principles of yield regulation; description of methods used in the USSR and in other communist and capitalist countries; relation of methods to the principle of sustained yield and the normal forest.

B5 TIRZIU, D. Determining the economic efficiency of the shelterwood system. In Rumanian; Eng. sum. Buletinul Universitatii din Brasov, B, No. 15, pp. 37-47. 1973.

Partial analysis of the comparative costs of the clear-felling and shelterwood systems, based on the costs of shelterwood fellings at several sites in Rumania, and of various measures for artificial regeneration.

D1 FOLKMAN, WILLIAM S. Butte County, California, residents: their knowledge and attitudes about forest fires reassessed. USDA Forest Serv. Pacific Southwest Forest and Range Exp. Sta. Res. Note PSW-297, 5 pp. 1975.

Data from a 1964 and a 1970 survey of Butte county, California, residents are analyzed to identify the characteristics of people who might be considered high fire risks because of their limited knowledge and negative attitude about fire and their frequent use of wildlands. Age, sex, education, and income are the variables most closely related to variations in knowledge, attitudes, and activity.

D4 JAGAIKE, T. The smoke-pollution problem in the Hitachi mine and national forest. In Japanese. Forest Economy 28(1): 24-32, Jan 1975; 28(2): 24-31, Feb 1975.

E ANWAR, AFFENDI. Optimal economic control strategies in forest resource management. Dissertation, Ph.D. Montana State Univ. 158 pp. 1974.

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E CONRAD, J. Importance of model operations. In German. Forst Holzwirt 29(14): 311-313. Jul 1974.

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III APPLIED TO FOREST PRODUCTION

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E GREGERSEN, H. M. The use of sector accounting methodology in forest-based sector planning. Food and Agriculture Organization of the United Nations. Swedish Funds-In-Trust TF No. 91, pp. 57-133. 1973.

Mathematical formulas are given.

E KUMAZAKI, M. A study of forest planning (II)--safe minimum standard of conservation and public regulation of forest resources. In Japanese; Eng. sum. Bul. of the Government Forest Exp. Sta. 270: 1-42. Jan 1975.

E LEMBERSKY, MARK R., and K. NORMAN JOHNSON. Optimal policies for managed stands: an infinite horizon Markov decision process approach. Forest Science 21(2): 109-122. Jun 1975.

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E MAEZAWA, K. A trial for yield planning. In English; Japanese sum. Bul. of the Tokyo Univ. Forests, No. 66, pp. 1-53. 1974.

A study of simulation as an aid to forest management planning and yield regulation, using a model forest of artificially regenerated Cryptomeria japonica and Chamaecyparis obtusa in central Honshu.

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E MUTCH, W. E. S. Land management--an ecological view. Jour. of Environmental Management 2(3): 259-267. 1974.

A model in which land allocation and management decisions are represented as three successive stages (ecological study, economic analysis, and political-administrative selection) is rejected because it does not account for what happens in practice. In any case, the model's first stage calls for ecological ranking, which is not possible.

E NOVOTNY, M., and V. KHUN. Results of mathematical-statistical analyses of the influence of natural conditions on production costs in forestry. In English; Russian sum. Communicationes Instituti Forestalis Cechoslaveniae No. 8, pp. 61-67. 1973.

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IV APPLIED TO MANUFACTURING

A1a FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. 1972 yearbook of forest products. In English, Spanish and French. Food and Agriculture Organization of the United Nations, Forest Industries and Trade Division. 439 pp. 1974.

Production, exports and imports of roundwood, industrial wood, sawnwood, pulp, paper, and paperboard by country, 1961 through 1972.

A1a FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. Yearbook of forest products, 1973. In English, French, and Spanish. Food and Agriculture Organization of the United Nations, Rome. 371 pp. 1975.

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A1a FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forest Industries and Trade Division. 1973 yearbook of forest products. In English, Spanish, and French. 427 pp. 1974.

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A1a FRENCH, ROBERT D. Energy crisis blessing in disguise for wood industries. Forest Industries 102(9): 22-23. Aug 1975.

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A1b BLYTH, JAMES E., ALLAN H. BOELTER, and CARL W. DANIELSON. Primary forest products industry and timber use, Michigan, 1972. USDA Forest Serv. North Central Forest Exp. Sta. Resource Bul. NC-24, 45 pp. 1975.

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A1b RUDERMAN, FLORENCE K. Production, prices, employment, and trade in northwest forest industries, fourth quarter 1974. USDA Forest Serv. Pacific Northwest Forest and Range Exp. Sta. 52 pp. 1975.

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A1b SCHUSTER, ERVIN G., CHARLES R. HATCH, and WILLIAM D. KOSS. Location quotients, excess employment and short-run economic base multipliers for Idaho's forest products industry. Univ. of Idaho, College of Forestry, Wildlife and Range Sciences Information Series No. 10, 22 pp. Mar 1975.

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A1c PARNANEN, H. Some views on the development of prices and costs in the Finnish forest industry. Unitas 46(3): 119-127. 1974.

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A1c SCHREIBER, A. Distribution and utilization of Scots pine wood in the German Federal Republic--present position and future trends. In German. Forst- und Holzwirt 29(24): 524-534. 1974.

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A1e BASCOPE, V. F. Bolivia: forest industries--renewable natural resources. In Spanish. Food and Agriculture Organization of the United Nations Seminario Finlandia Sobre Aserrio y Otras Industrias Forestales Mecanicas en la Cuenca del Amzonas, 11 Nov 1974. 27 pp. 1974.

Forest industry, watersheds, and forest types in Bolivia. Wood production by tree species and forest product. Marketing, especially export volume and value by month and destination.

A4 GRAVES, DONALD H. Alternative marketing strategies: a linear programming application to Kentucky sawmills. Dissertation, Ph.D. Univ. of Kentucky. 308 pp. 1974.

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A4 JACKSON, B. G. Forest products in the United Kingdom economy. Forestry Commission Bul., UK, No. 51, 112 pp. 1974.

The object of this linear-programming model is to indicate strategy for the development of the wood products sector of the UK economy which will maximize discounted net benefit.

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B2 BOYD, J. H., and J. KURELEK. Logging research and development in the USSR. Forest Management Res. Institute Information Rep. FMR-X-67, 58 pp. 1974.

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B2 KARKKAINEN, M. Planning harvesting operations in a state forest area: some points of view on decision theory. In Finnish; Eng. sum. Helsingin Yliopiston Metsateknologian Laitos Tiedontoja No. 27, 88 pp. 1973.

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B2 KOVALIN, D. T. Mechanization of forestry, including logging. In Russian. Vysshaya Shkola, Moscow. 332 pp. 1974.

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B2 KRESTYASHIN, L. I., and A. N. KUZNETSOV. Optimum age for the principal felling in production forests. In Russian. Lesnoe Khozyaistvo No. 9, pp. 75-78. 1974.

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B2 LUNDBERG, L. Logging methods for owner-operated woodlands. In Swedish; Eng. sum. Redogorelse, Forskningsstiftelsen Skogsarbeten No. 4, 48 pp. 1974.

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B2 MANGUNDIKORO, A. An analysis of the production costs of logging operations in East Kalimantan. In Indonesian; Eng. sum. Laporan, Lembaga Penalitian Hasil Hutan No. 22, v + 32 pp. 1973.

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B2 SPIERS, J. J. K. Impact of forest harvesting on environmental values. New Zealand Forest Serv., Wellington. 11 pp. 1974.

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B2 TIMINGER, J. Example of a cost/benefit analysis in logging. In German. Allgemeine Forstzeitschrift 29(16): 332-336. 1974.

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B4 GUREV, T. A., and V. A. LUKINA. On the economic effectiveness of using network planning and control in construction of forest logging roads. In Russian. Lesnoi Zhurnal 5: pp. 142-146. 1974.

B4 ORMROD, P. C., and R. C. STERN. Report of a working party on lorry transport of roundwood. Res. Development Pap. 97, Forestry Commonwealth, London. 1973.

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C1a MUSTANOJA, K. J. The role of sawmilling industry in the world. In Spanish. Food and Agriculture Organization of the United Nations. Rep. on the FAO/Finland Seminar on Sawmilling and Wood Grading for Latin America, Chile, March 12-30, 1973. Pp. 55-66. 1974.

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C1a SCHREWE, H. Chile--role of sawmilling industry in agrarian reform--report to the government. In Spanish. Food and Agriculture Organization ofthe United Nations. UNDP/TA Rep. No. 3219, 26 pp. 1973.

C1c BOWYER, JIM L. Economic return comparison of several lumber production systems designed for small-log conversion. Forest Products Jour. 25(7): 39-43. Jul 1975.

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C1c CUNNINGHAM, J. P. Increasing scarcity of energy, an external factor influencing modernization decisions. Symposium on the Modernization of the Sawmilling Industry, Geneva, Switzerland, January 13-17, 1975. 21 pp. 1975.

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C1c PHILLIPS, DOUGLAS R., JAMES G. SCHROEDER, and MICHAEL A. TARAS. Predicted green lumber and residue yields from the merchantable stem of black oak trees. USDA Forest Serv. Southeastern Forest Exp. Sta. Res. Pap. SE-120, 10 pp. 1974.

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C1c TARAS, MICHAEL A., JAMES G. SCHROEDER, and DOUGLAS R. PHILLIPS. Predicted green lumber and residue yields from the merchantable stem of loblolly pine. USDA Forest Serv. Southeastern Forest Exp. Sta. Res. Pap. SE-121, 11 pp. 1974.

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C2a SMITH, LEONARD S. Large scale expansion and modernization of Soviet pulp and paper industry continues. Pulp, Paper, and Board 30(4): 8-9. U.S. Dept. of Commerce. Jan 1975.

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C2b GENDRON, PIERRE R., and LIONEL A. COX. Impressions of research management and some programs of research in the USSR pulp and paper industry. Directorate of Program Coordination Information Rep. DPC-X-4, 38 pp. 1974.

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C2b KEAYS, J. L. Full-tree chips for kraft--yield, quality, and economics. Pulp and Pap. Mag. of Canada. Pp. 43-47. Sep 1974.

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C2b WAYMAN, M. The planning function of pulp and paper enterprises. In English; French and Spanish summaries. FAO Forestry and Forest Products Studies No. 18, pp. 27-46. Food and Agriculture Organization of the United Nations, Forestry Dept. 1973.

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C2c BONES, JAMES T., and DAVID R. DICKSON. Pulpwood production in the Northeast, 1973. USDA Forest Serv. Northeastern Forest Exp. Sta. Resource Bul. NE-37, 19 pp. 1974.

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C8 EARL, D. E. A report on charcoal. Food and Agriculture Organization of the United Nations, FAO Fellowship, Wood Products. 104 pp. 1974.

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C10 RICH, STUART U. Outlook for housing demand. Forest Products Jour. 25(4): 8. Apr 1975.

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D4 ROBBINS, S. R., and S. A. MATTHEWS. Minor forest products. In English, Spanish, and French. Unasylva 26(106): 7-14. 1974.

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A2 ALTMAN, JAMES A. South's long-term pulpwood requirements to continue upward. Forest Farmer 34(8): 10-11, 17. Jun 1975.

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A2 CHEN, HSI-HUANG. A dynamic analysis of supply and demand for lumber in the United States, 1950-1972 and projections to 1985 Dissertation, Ph.D. Univ. of Georgia. 169 pp. 1974.

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A2 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Dept. Wood fibre resources and pulpwood requirements. Food and Agriculture Organization of the United Nations, Rome. 35 pp. Aug 1974.

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A2 GRAYSON, A. J. Wood resources and demands: a statistical review. Forest Record, Forestry Commission, UK, No. 95, 14 pp. 1974.

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A2 HOLLEY, LESTER D., JR., RICHARD W. HAYNES, and H. FRED KAISER, JR. An interregional timber model for simulating change in the softwood forest economy. School of Forest Resources, North Carolina State Univ., Tech. Rep. No. 54, 70 pp. Mar 1975.

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A2 LESLIE, A. J. Demand projections for forest products. Antecedent FAO Studies of Sawnwood. In Spanish. Food and Agriculture Organization of the United Nations Seminario Finlandia Sobre Aserrio y Otras Industrias Forestales Mecanicas en la Cuenca del Amazonas, 11 Nov., 1974. 7 pp. 1974.

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A2 MATHUR, R. S. Certain trends in the consumption of wood in India. Indian Forester 101(1): 73-79. Jan 1975.

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V APPLIED TO MARKETING, TRADE, AND DEMAND FOR FOREST OUTPUT

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A2 STAGE, ALBERT R. Predicting the future forest. Permanent Association Committee Proceedings, 1973, Western Forestry and Conservation Association, Portland. Pp. 166-168. 1974.

Prediction involves estimating (1) changes in land use, for which there are only a few models, and (2) changes in growing stock, for which there are many computer programs.

A2 TRUE, A. The consumption of selected forest products, 1972 and 1980. Industrial Res. Study, Timber Res. and Development Association No. I/RS/6, 52 pp. 1974.

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A2 VAN NIEKERK, D. J. T. An analysis of timber supply and demand trends in South Africa. CSIR Special Rep., Timber Res. Unit, South Africa Hout 63, 26 pp. 1973.

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A3 JUSLIN, HEIKKI. Selection of building materials for detached houses. In English; Finnish sum. Communicationes Instituti Forestalis Fenniae, Helsinki. 169 pp. 1975.

How decision making concerning the selection of building materials for self-built detached houses takes place within a family, and how husband and wife obtain product information for their decisions in choosing building materials for their house.

V APPLIED TO MARKETING, TRADE, AND DEMAND FOR FOREST OUTPUT

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B1a TAKEUCHI, K. Tropical hardwood trade in the Asia-Pacific region. World Bank Staff Occasional Papers No. 17, xviii + 90 pp. 1974.

B1a THOMSON, A. P. Marketing of forest products. New Zealand Jour. of Forestry 19(1): 75-83. 1974.

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B3 BUFORD, JAMES A. Some aspects of competition in the southern pine lumber industry of Alabama, 1967-1972. Dissertation, Ph.D. Univ. of Georgia. 208 pp. 1974.

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B3 HICKMAN, CLIFFORD A., and BEN D. JACKSON. Forecasting monthly orders for southern pine lumber. Forest Products Jour. 25(4): 31-36. Apr 1975.

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B4a FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forest Industries and Trade Division. Demand and supply of newsprint and other printingand writing papers in Asia and the Far East. Food and Agriculture Organization of the United Nations UNESCO Meeting of Experts on the Development of the Periodical Press in Asia--Tokyo, Japan, June 11-17, 1974. 10 pp. 1974.

B4a POST, HOWARD A., and DONALD W. BUTTS. Commodity trends, January-September, 1974. Pulp, Pap., and Board 30(4): 3-5. U.S. Dept. of Commerce. Jan 1975.

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V APPLIED TO MARKETING, TRADE, AND DEMAND FOR FOREST OUTPUT

B4a WANSBROUGH, J. Market surveys of pulp and paper products. In English; French and Spanish summaries. FAO Forestry and Forest Products Studies No. 18, pp. 112-123. Food and Agriculture Organization of the United Nations, Forestry Dept. 1973.

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C2 GUILLARD, J., and F. ROSSNER. Changes in the price of wood: a tentative analysis of long-term trends in France. In French; German, English, and Spanish summaries. Revue Forestiere Francaise 26(3): 179-210. 1974.

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C2 SHAKHOV, G. N. Timber pricing and principles for its improvement. In Russian. Lesnoe Khozyaistvo No. 8, pp. 26-30. 1974.

Theories of the economic nature of stumpage in the socio-economic system of the USSR. Changes and developments in the system of stumpage pricing in the USSR since 1930; deficiencies in the system.